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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,180	11/11/2003	Daniel P. Vollmer	020569-03900 (P202-1284-U	4645

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EXAMINER	
FIGUEROA, JOHN J	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/705,180	VOLLMER, DANIEL P.	
	Examiner	Art Unit	
	John J. Figueroa	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-9,12,14,15,18,19 and 21-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-9,12,14,15,18,19 and 21-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The 35 U.S.C. 112, second paragraph, rejection in item 4 on page 3 of the Office Action ('OA') of October 3, 2005 has been withdrawn in view of Applicant's amendment of February 17, 2006.

2. The 35 U.S.C. 102 rejection of claims 7-9 as anticipated by Korzilius is maintained for the reasons previously made of record in item 6 on page 4 of OA.

3. The 35 U.S.C. 102 rejection over Korzilius, with respect to claims 1-4, 12, 14, 15, 18, 19 and 21, has been withdrawn in view of Applicant's amendment to the claims.

4. The 35 U.S.C. 102 rejection over Vollmer, item 7 on page 4 of OA, has been withdrawn in view of Applicant's amendment to the claims.

5. The 35 U.S.C. 103 rejection of claims 7-9 as unpatentable over Clarke-Sturman is maintained for the reasons previously made of record in item 9 on page 6 of OA.

6. The 35 U.S.C. 103 rejection over Clarke-Sturman, with respect to claims 1-4, 12, 14, 15, 18, 19 and 21 has been withdrawn in view of Applicant's amendment to the claims.

7. The 35 U.S.C. 103 rejection over Clarke-Sturman and Nimerick, item 10 on page 7 of OA, has been withdrawn in view of Applicant's amendment to the claims.

8. The 35 U.S.C. 103 rejection over Clarke-Sturman in view of Chesser, item 11 on page 8 of OA, has been withdrawn in view of Applicant's amendment to the claims.

9. The double patenting rejection of claims 7-9, 12, 14, 15 and 19 is maintained for the reasons previously made of record in item 13 on page 10.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application Number 482 533 A2 to AQUALON (hereinafter 'AQUALON').

Examiner notes that amended claim 1 limits the alkali formate to be about 40 to about 75 weight percent of the *solution*, whereas the cellulosic polymer is limited to about 10 to about 23 weight percent of the *suspension*.

AQUALON discloses a fluidized aqueous suspension, that can be used in oil and gas recovery applications, prepared by the addition of 15% by total suspension weight of a polymer to a concentrated sodium formate solution containing xanthan gum as a suspension stabilizer; wherein the polymer can be

a nonionic cellulosic polymer, such as hydroxyethylcellulose and derivatives thereof, and the concentrated formate solution is greater than 30 percent by weight of the total suspension. (*See* Abstract; page 2, lines 1-2, 9-18 and 39-49)

In the table on page 2, lines 28-38, AQUALON discloses a fluid suspension of hydroxyethylcellulose in 55% sodium formate by weight *of the solution of water and sodium formate*. In Example 1 on page 3, lines 25-35, a fluidized polymer suspension is disclosed containing about 15% by *suspension* wt. of hydroxyethylcellulose and 0.15% wt. xanthan gum in about 55% by weight of the *solution* of concentrated sodium formate.

Although AQUALON does not specifically disclose the "true crystallization temperature (TCT), API 13 J" property for the aqueous suspension, because the aqueous suspensions disclosed by AQUALON and encompassed by the instant claims are the same, then AQUALON's aqueous suspension and that recited in the instant claims must inherently posses the same physical properties, such as TCT.

Thus, the claims are anticipated by AQUALON.

12. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent Number (USPN) 5,837,864 to Andersson et al. (hereinafter 'Andersson').

Anderson discloses a cellulosic suspension produced by mixing a water component with a dry mixture containing nonionic cellulose ether crosslinked with glyoxal and a mixture of salts; wherein the preferred nonionic cellulose ether is hydroxyethylcellulose and the mixture of salts contains 50% by weight or more of

an electrolytic salt, such as sodium formate. (Abstract; col. 1, line 65 to col. 2, line 21; col. 2, lines 39-65; Examples 1 and 2) The cellulose ether constitutes 8-25% by weight of the suspension, the electrolytic salt (sodium formate) is present in an amount of 20-45% by weight of the suspension, and the suspension can further include 0.01 to 3% of a stabilizer, such as xanthan gum. (Col. 2, lines 4-12)

Although Andersson does not specifically disclose the "true crystallization temperature (TCT), API 13 J" property for the aqueous suspension, because the aqueous suspensions disclosed by Andersson and encompassed by the instant claims are the same, then Andersson's aqueous suspension and that recited in the instant claims must inherently posses the same physical properties, such as TCT.

Therefore, the claims are anticipated by Andersson.

13. Claims 1-4, 7-9 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,479,573 B2 to Burdick (hereinafter 'Burdick').

Burdick discloses an aqueous suspension, that can be used as a thickening an aqueous system such as an oil well drilling mud, said aqueous suspension comprising water, a salt(s) including a carbon-containing salt, xanthan gum as a stabilizer, a water-soluble polymer and/or a co-suspended thickening polymer, such as hydroxyethylcellulose (nonionic), hydrophobically-modified hydroxyethylcellulose and carboxymethylcellulose; wherein the most preferred carbon-containing salts are sodium formate and potassium formate. (Col. 3, lines 33-40; col. 4, lines 35-37 and 63-67; col. 5, lines 15-25 and 44-59;

col. 14, lines 1-50; *See e.g.,* Examples 2-3 disclosing a suspension containing hydroxyethylcellulose and xanthan gum in a sodium formate aqueous solution; Example 4 disclosing using the suspension of Example 3 as a thickening agent) The suspension can contain one carbon-containing salt or a mixture of salts that can include inorganic salts. (Col. 4, lines 19-48)

Burdick further discloses that the carbon-containing salt can be present in up to about 45% by weight of the *suspension*, the polymer(s) about 5 to 30% and water about 40 to 85%. Thus, the concentration of the salt(s) in *solution* can be as high as 55%. (Col. 4, lines 48-63; col. 13, lines 54-58)

Although Burdick does not specifically disclose the "true crystallization temperature (TCT), API 13 J" property for the aqueous suspension, because the aqueous suspensions disclosed by Burdick and encompassed by the instant claims are the same, then Burdick's aqueous suspension and that recited in the instant claims must inherently posses the same physical properties, such as TCT.

Thus, the claims are anticipated by Burdick.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 4, 7-9, 12, 14, 15, 18, 19 and 21-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson in view of USPN 6,315,061 B1 to Boatman et al. (hereinafter 'Boatman').

Andersson was discussed above in paragraph #12. Andersson does not disclose a cellulosic suspension using a mixture of sodium formate with potassium formate and/or cesium formate.

On the other hand, Boatman teaches a brine-based drilling fluid for oil and gas recovery operations stored in a ballast compartment of a work boat, wherein said drilling fluid does not contains undissolved solids and is designed to provide a biostatic environment and a density appropriate for the environment. (Abstract; col. 1, line 54 to col. 2, line 18)

Boatman further teaches that the density of a drilling fluid is designed to maintain the hydrostatic pressure within the well bore to prevent shallow water flows and that the fluid density is dependent on the amount of dissolved solids present in the fluid, such as the amount of formate salts of sodium, potassium and cesium that is present in the fluid. (Col. 3, lines 46-54; col. 9, lines 40-50; col. 10, lines 39-42)

Furthermore, Boatman teaches that the density of the drilling fluid is adjusted by selecting an appropriate salt combination based on several factors, such as environmental considerations, the requisite minimum/maximum density, cost considerations and/or desired freezing point of the solution (particularly for off-shore drilling applications in colder waters). (Col. 3, lines 54-59)

In Examples 3-6, Boatman teaches viscosified drilling fluid brines of varying densities containing liquid hydroxyethylcellulose and xanthan gum as a stabilizer, in calcium chloride, calcium bromide, sodium formate and potassium formate brines respectively.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time that the invention was made to manipulate the alkali formate salt content (and, thus, the density) of Andersson's suspension and add it to a brine-based drilling fluid (such as Boatman's calcium chloride or calcium bromide drilling fluids) to thicken the drilling fluid. One of ordinary skill in the art would have been motivated to do so by the teachings in Boatman to attain an optimized density for the resultant brine-based drilling fluid that would be appropriate for a particular drilling operation condition, including under hazardous and extreme temperature/pressure conditions, and that is, furthermore, environmentally friendly.

Thus, the claims are unpatentable over Andersson and Boatman.

16. Claims 12, 14, 15, 18, 19, 21, 25-28 and 30-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burdick in view Boatman.

Burdick was discussed above in paragraph #13. Burdick does not disclose a method for thickening a brine during oil/gas recovery by introducing the suspension to a brine or using a mixture of sodium formate with potassium formate and/or cesium formate.

Boatman was discussed above in paragraph #15.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time that the invention was made to manipulate the alkali formate salt content (and, thus, the density) of Burdick's suspension and add it to a brine-based drilling fluid (such as Boatman's calcium chloride or calcium bromide drilling fluids) to thicken the drilling fluid. One of ordinary skill in the art would have been motivated to do so by the teachings in Boatman to attain an optimized density for the resultant brine-based drilling fluid that would be appropriate for a particular drilling operation condition, including under hazardous and extreme temperature/pressure conditions, and that is, furthermore, environmentally friendly.

Thus, the claims are unpatentable over Burdick and Boatman.

Double Patenting

17. Claims 18 and 21-39 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3-6 of copending Application No. 10/911,038. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the same reason made of record in item 13 on page 10 of OA.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

The 102 Rejection over Korzilius

18. Applicant's arguments filed February 17, 2006 regarding the 35 U.S.C. 102 rejection over Korzilius, with respect to claims 1-4, 12, 14-15, 18-19 and 21 have been considered but have become moot in view of the new ground(s) of rejection due to Applicant's amendment to the claims.

19. Applicant's arguments regarding claims 7-9 have been fully considered but they are not persuasive.

In response to Applicant's argument regarding the amount of polymer that is employed by Korzilius is less than 10 percent, it is noted that this feature of the claimed suspension upon which applicant relies is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant has amended independent claim 7 to limit the transition phrase to "consisting essentially of" from "comprising of" language to overcome the disclosure in Korzilius that discloses a composition containing clay. (*See* "Remarks" section of Amendment, page 8, lines 13-14). However, it is unclear from the specification as to why "clay", a common additive in drilling fluids, would be a component of the suspension that would materially alter the suspension. There is no disclosure in the specification that will allow a person of ordinary skill in the art to determine that a common additive, such as clay, is encompassed by the claim as amended. *See* MPEP 2111.03. (See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase

consisting essentially of' for purposes of its patent by making clear *in its specification* what it regarded as constituting a material change in the basic and novel characteristics of the invention."). [Emphasis added] If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," *applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention.* [Emphasis added] In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964).

The 102 Rejection over Vollmer

20. Applicant's arguments regarding the 35 U.S.C. 102 rejection over Vollmer have been considered but are moot in view of the new ground(s) of rejection in view of Applicant's amendment to the claims.

The 103 Rejection over Clarke-Sturman

21. Applicant's arguments regarding the 35 U.S.C. 102 rejection over Clark-Sturman, with respect to claims 1-4, 12, 14, 15, 18, 19 and 21 have been considered but are moot in view of the new ground(s) of rejection in view of Applicant's amendment to the claims.

22. Applicant's arguments regarding claims 7-9 have been fully considered but they are not persuasive.

In response to applicant's argument that Clark-Sturman does not disclose using the fluid composition to thicken a brine, this use of the claimed suspension

is not recited in the claims. Moreover, a recitation of an intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding the language of claim 7 having been amended to recite "consisting essentially of" instead of "comprising of", as discussed above in paragraph #19, it is unclear as why the presence of "clay" in the suspension would materially change and alter the claimed invention.

The 103 Rejection over Clarke-Sturman and Nimerick

23. Applicant's arguments have been fully considered and found persuasive. Therefore, this rejection of OA has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Applicant's amendments to the claims.

The 103 Rejection over Clarke-Sturman and Chesser

24. Applicant's arguments have been fully considered and found persuasive. Therefore, this rejection of OA has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Applicant's amendments to the claims.

The Double Patenting Rejection

25. Applicant did not provide any substantive arguments in response to the double patenting rejection and it is thus maintained and further extended above in paragraph #17 to include claims 18 and 21-39.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is

(571) 272-8916. The examiner can normally be reached on Monday-Thursday & alt. Fri 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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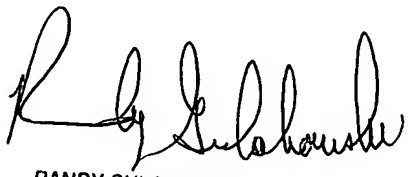

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